

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Currently Amended)

An electronic ballast control for controlling a power switch in an electronic ballast to switch power to a load, comprising:

a storage device for storing parameters to operate ballast control components;

a control device coupled to the storage device for reading parameters from the storage device and providing the parameters to the ballast control components;

an oscillator coupled to the control device for receiving the parameters from the control device and providing an oscillation signal based on the received parameters;

an output section coupled to the oscillator and operable to receive the oscillation signal and produce signals for operating the power switch;

wherein the control is implemented as a single integrated circuit.

Claim 2 (Original)

The control according to claim 1, further comprising a minimum frequency signal applied to the oscillator to determine a minimum oscillation frequency provided by the oscillator.

Claim 3 (Original)

The control according to claim 2, further comprising a passive component coupled to the oscillator to provide the minimum frequency signal.

Claim 4 (Original)

The control according to claim 1, further comprising an input device coupled to the storage device for inputting data to the storage device.

Claim 5 (Original)

The control according to claim 4, further comprising an input data to the input device, wherein the input device is operable to translate the input data to a format suitable for input to the storage device.

Claim 6 (Cancelled)**Claim 7 (Original)**

The control according to claim 1, wherein the storage device is a digital storage device.

Claim 8 (Original)

The control according to claim 1, wherein the control device is a digital control device.

Claim 9 (Original)

The control according to claim 1, wherein the oscillator is a digital oscillator.

Claim 10 (Currently Amended)

The control according to claim 1, wherein the control device or the controller is programmable with parameters from the storage device, whereby the control is operable to obtain variable operating characteristics based on parameter programming.

Claim 11 (Currently Amended)

~~The control according to claim 9~~ An electronic ballast control for controlling a power switch in an electronic ballast to switch power to a load, comprising:

a storage device for storing parameters to operate ballast control components;

a control device coupled to the storage device for reading parameters from the storage device and providing the parameters to the ballast control components;

an oscillator coupled to the control device for receiving the parameters from the control device and providing an oscillation signal based on the received parameters; and
an output section coupled to the oscillator and operable to receive the oscillation signal and produce signals for operating the power switch,
wherein the oscillator is a digital oscillator, and
further comprising a DAC in the oscillator for converting in an input digital signal to an analog signal, whereby the oscillation frequency is related to the analog signal.

Claim 12 (Currently Amended)

A method of operating an electronic ballast, comprising:
storing data in a storage device related to ballast control parameters;
reading data from the storage device to obtain parameters for operating the ballast control; and
applying the parameters to ballast control components to obtain selected operating points for the components, including applying a digital oscillator control signal to a digital oscillator in the control, and D/A converting said oscillator control signal to an analog signal, whereby the oscillation frequency is related to the analog signal;
whereby the ballast control outputs a control signal based on a selection of parameters applied to the components.

Claim 13 (Original)

The method according to claim 12, wherein storing data in the storage device further comprises applying a storage input signal to an input coupled to the storage device; and
applying an enable signal to another input coupled to the storage device to enable the data signal to be accepted and stored by the storage device.

Claim 14 (Original)

The method according to claim 12, wherein the data is digital data.

Claim 15 (Original)

The method according to claim 14, further comprising selectively applying the digital data to the ballast control components to obtain operating set points for the ballast control.

Claim 16 (Currently Amended)

The method according to claim 12, further comprising applying a minimum frequency signal to ~~an~~ said oscillator component in the ballast control to determine a relative minimum switching frequency for the ballast control.

Claim 17 (Original)

The method according to claim 12, further comprising providing a buffered voltage bias in the ballast control that is decoupled from an AC input.

Claim 18 (Currently Amended)

~~The method according to claim 12~~ A method of operating an electronic ballast, comprising:
storing data in a storage device related to ballast control parameters;
reading data from the storage device to obtain parameters for operating the ballast control; and
applying the parameters to ballast control components to obtain selected operating points for the components,
whereby the ballast control outputs a control signal based on a selection of parameters applied to the components,
further comprising counting a number of events in the ballast control to determine when the number of events reach a predetermined value in a specified time period.

Claim 19 (Currently Amended)

~~The method according to claim 12~~ A method of operating an electronic ballast,

comprising:

storing data in a storage device related to ballast control parameters;

reading data from the storage device to obtain parameters for operating the ballast control; and

applying the parameters to ballast control components to obtain selected operating points for the components.

whereby the ballast control outputs a control signal based on a selection of parameters applied to the components,

further comprising timing one or more events to determine if a predetermined time duration is achieved for the one or more events.

Claim 20 (Original)

A ballast control IC, comprising:

a digital memory for storing control parameters;

a digital controller coupled to the memory for reading parameters from the memory;

a digital oscillator coupled to the controller for receiving a digital oscillation set point and providing an oscillation signal based on the set point.

Claim 21 (Original)

The IC according to claim 20, further comprising a digital counter for counting a number of events and providing an indication if a predetermined count is reached.

Claim 22 (Original)

The IC according to claim 20, further comprising a timer in the controller for timing an event and outputting a signal if a predetermined duration of time passes related to the event.

Claim 23 (New)

The control according to claim 1, further comprising an input section of said

integrated circuit for inputting said parameters, said input section comprising only two pins of said integrated circuit for receiving a data signal and a clock signal, respectively.

Claim 24 (New)

The control according to claim 23, wherein said input section is further for inputting a plurality of additional parameters for operating a corresponding additional plurality of said ballast control components.

Claim 25 (New)

The control according to claim 1, wherein said integrated circuit has a pair of shut-down pins for inputting control parameters corresponding to a pair of loads, said control parameters enabling said control to shut down if one load is removed, and/or to continue running if one load is removed, and/or to initiate a startup operation when a removed load is replaced by a new load.